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July 23, 2011

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Mr. Allen Wojtas
Contract Level Contracting Officer's Representative
U.S. EPA, Region 5, LP-9J
77 W. Jackson Blvd
Chicago, IL 60604

Reference: EPA Contract No. EP-W-07-074; TechLaw Task Order No. R05033; EPA Task Order No. EP-G10S-00032; Sampling and Oversight Support; Sampling and Analysis Plan for Soil Sampling at Residences near the Solutia, Inc. Facility, Sauget, Illinois; Task 3 Deliverable

Dear Mr. Wojtas:

Please find enclosed TechLaw's Sampling and Analysis Plan (SAP) for soil sampling at residences near the Solutia, Inc. facility in Sauget, Illinois. This SAP was developed in accordance with the Amended Technical Direction Memo dated July 23, 2012; discussions with Mr. Ken Bardo on July 9, 2012; and, e-mail correspondence from Mr. Bardo, dated July 13, 2012.

For your convenience this deliverable was also e-mailed directly to you and Mr. Ken Bardo in MS Word format. Should you have any questions, please contact me at (312) 345-8974 or Ms. Kim Whitlock, TechLaw's Task Order Manager at (312) 345-8930.

Sincerely,

Terry Zdon
Program Manager

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SAMPLING AND ANALYSIS PLAN
FOR SOIL SAMPLING AT RESIDENCES NEAR THE SOLUTIA, INC. FACILITY
SAUGET, ILLINOIS

Introduction

The following constitutes the Sampling and Analysis Plan (SAP) for the collection of soil samples at residences near the Solutia, Inc. facility in Sauget, Illinois. A previous sampling effort, conducted by others, indicated the presence of polychlorinated biphenyls (PCBs) in soil at concentrations exceeding screening standards at several locations in Sauget and East St. Louis, Illinois. Following this previous sampling effort, an air deposition model analysis completed in January 2011 estimated that PCBs may be present in soil at concentrations in excess of screening standards in residential areas of East St. Louis that were not previously sampled.

It is anticipated that the sampling activities outlined in this SAP will take place the week of August 13, 2012. Soil samples will be collected from approximately 20 locations specified by EPA, and analyzed for PCBs. A subset of the samples will also be analyzed for Resource Conservation Recovery Act (RCRA) metals. Additional detail is provided in subsequent sections of this SAP.

This SAP will be used in conjunction with TechLaw's EPA-approved Program Quality Assurance Project Plan for Sample Collection and Analysis for REPA Zone 2, EPA Regions 4, 5, and 6, dated October 2007 (Program QAPP) and TechLaw's Site Specific Health and Safety Plan. Samples will be analyzed by ALS in Rochester, New York.

Purpose and Objective

The field activities conducted by TechLaw are intended to provide support to EPA through the sampling of select locations in East St. Louis, Illinois, near the Solutia, Inc. facility, to evaluate whether PCBs and RCRA metals are present in soil at concentrations which exceed applicable screening standards. The activities proposed in this SAP are based on information provided by EPA in an Amended Technical Direction Memorandum (TDM) dated July 23, 2012, and meetings and discussions with EPA staff.

Background Information

In 2009, EPA collected soil samples from 30 residences and two parks located in Sauget and East St. Louis, Illinois, near the former PCB-manufacturing area of the Solutia, Inc. facility located in Sauget, Illinois. A total of 34, five-point composite surface soil samples were collected and analyzed for PCB homologs. Samples collected from four locations in Sauget and two locations in East St. Louis had PCB concentrations which exceeded the preliminary remediation goal of one part per million (ppm).

Samples from each discrete location will be placed in a disposable bowl or bag, and will be homogenized with a disposable spoon or trowel. After thorough mixing, the soils will be placed into the appropriate sample containers and stored on ice in a cooler. All soil remaining in the disposable bowl or bag after the sample jars have been filled will be placed back into the area from which the sample was originally obtained. All sample locations will be marked with a flag for subsequent surveying via the use of a handheld global positioning system (GPS) unit.

Upon collection of these samples, TechLaw will properly label, package, and ship the samples to the ALS in Rochester, New York. All samples will be analyzed for PCBs by Method 680; former creek bed samples will also be analyzed for RCRA metals by Methods 6010C and 7471B. Sample containers, preservatives, and holding time requirements are listed below:

Matrix	Analytical Group	Method	Sample Volume	Containers (number, size, and type)	Preservation Requirements (chemical, temperature, light protected)	Maximum Holding Time (prep/analysis)
Soil	PCBs	680	1 8-oz	1 8-oz wide-mouth glass jar with Teflon-lined lid	Cool to 4°C	14 days extract/ 40 days analysis
Soil	RCRA Metals	6010C 7471B	1 8-oz	1 8-oz wide-mouth glass jar with Teflon-lined lid	Cool to 4°C	Metals: 180 days Mercury: 28 days

Records of each sample collected will be documented in a field log book. Photographs will also be taken of the samples and sample locations to identify the sample setting and in part to demonstrate that samples are representative. To ensure that samples are secure from tampering, chain of custody (COC) documentation is utilized to provide a traceable record of sample custody. See Appendix A of TechLaw's Program QAPP for TechLaw's standard operating procedures (SOPs) (02-03-03, Equipment Decontamination; 02-05-03, COCs; 03-01-04, Maintaining a Field Log Book; 03-02-04, Taking and Documenting Photographs; 04-01-02, Preservatives; and 04-02-02, Packing and Shipping Environmental Samples).

The sampling team members are responsible for the care and custody of the samples until they are properly transferred to the shipping company or laboratory. In addition, the sampling team members will ensure that samples are collected, maintained, and transferred in accordance with approved SOPs and COC requirements as follows: As few people as possible will handle samples. Sample tags/labels will be completed for each sample, using waterproof ink. Custody will be maintained in the field by ensuring the samples are accompanied by the COC documentation and are kept in a cooler that is within the line of sight or in a locked storage location from the time of collection until relinquished by signature and physical custody to the shipper.

Analytical Requirements

Samples will be shipped by TechLaw to ALS. All samples will be analyzed for PCBs by Method 680; former creek bed samples will also be analyzed for RCRA metals by Methods 6010C and 7471B.

Quality Control Samples

During the sampling activities performed by TechLaw, QC samples will be collected in general accordance with TechLaw's EPA-approved Program QAPP. A matrix spike/matrix spike duplicate sample will be collected at a frequency of one per 20 samples of a similar matrix. A field duplicate will be collected at a frequency of one per 10 samples of similar matrix.

Sample Collection and Data Record

The samples collected by TechLaw will remain in the custody of the TechLaw Sampling Team until relinquished to the shipper. The samples will be placed in a cooler immediately after collection and will be shipped via overnight courier directly to the laboratory by the TechLaw Sampling Team.

The sample containers will be appropriately labeled (label affixed directly on the face of the jar). A COC form will accompany the samples from point of origin to the analytical laboratory. The samples will be collected in the appropriate containers as specified in the "Sampling Activities" section above.

Project Schedule and Report Deliverables

It is anticipated that the sampling activities described herein will occur the week of August 13, 2012.

Following completion of the field activities, and receipt and validation of applicable analytical results, a field report will be prepared which presents the findings of the field work, sampling, and analysis. As directed in the TDM, the field report will include data validation of 25% of the samples with PCB detections approaching or greater than one ppm. Final qualifiers from the validation will be indicated on the laboratory hard copy reports. The laboratory summary reports will be attached as an Appendix to the field report. A photograph log and copies of the chain of custody forms will be provided. In addition, a figure depicting the sample locations overlain on an aerial photograph will be included.

Project Organization

Mr. Allen Wojtas is the Contract Level Contracting Officer's Representative (CLCOR) for this project and Mr. Ken Bardo is the EPA Technical Advisor (TA). The TechLaw Task Order Manager (TOM) for this project is Ms. Kim Whitlock. The TechLaw Team Leader, Ms. Kim Whitlock or her designee, will work with other TechLaw personnel in completion of this task. The laboratory for this project is ALS, located in Rochester, New York. Data validation will be performed by qualified TechLaw staff independent of the field activities.